

**A summary of Vessel
Operating Restrictions,
Reporting Guidelines, and
Mariner Resources on the
Delaware River for the
Winter Season**

**2008 – 2009
ICE GUIDE**



**U.S. Coast Guard
Sector Delaware Bay**

**(215) 271-4995
Pre-recorded information**

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**ICE OPERATIONS IN THE
UPPER DELAWARE
RIVER**

The following summary addresses the most common questions relating to ice formation. For additional details, consult the 'Related Web Sites' below for other sources of information.

Situation

Ice generally forms in the northern areas of the Upper Delaware River/Bay and C&D Canal in early January and is typically gone by February. However, severe winters do occur roughly every 7-10 years, causing severe disruptions in both the Upper Delaware River/Bay and C&D Canal. Ice may form as early as December and remain as late as March.

Ice fields in the Upper Delaware River move with prevailing winds and currents. Heavy ice buildups can occur in the C&D Canal from Town Point Wharf to Reedy Point. Other areas that are commonly affected by high volumes of ice are the Schuylkill River, the Christina River, Horseshoe Bend, Bulkhead Bar, Wilmington Marine Terminal and the Salem River. Once ice build up begins it can affect the transit of large ocean-going vessels.

Ice Breaking Resources

The Coast Guard operates on a non-interfere basis with private enterprise in ice breaking operations for navigational purposes, except when those commercial resources are deemed to be unavailable and inadequate. However, during a moderate or severe winter, ice in navigable waters can become a serious problem, requiring the use of Federal, State and private ice breaking resources. USCG Sector Delaware Bay will use its Captain of the Port authority, and the authority derived from Title 33 of the Code of Federal Regulations to promote the safe transit of vessels through ice congested waters, and the continuation of waterborne commerce throughout the winter season.

The USCG receives ice breaking, weather forecasting, reconnaissance, and emergency assistance from: State Department of Natural Resources, the Naval National Ice Center, the National Weather Service, and State Emergency Management Agency, the National Oceanic and Atmospheric Association and local agencies.

Copies of the complete Sector Delaware Bay Ice Operations Plan can be obtained by writing to:
Sector Commander
Waterways Management Division
USCG Sector Delaware Bay
1 Washington Ave.
Philadelphia, PA 19147

Vessel Convoys

During periods of severe cold weather, convoys may be required to ensure that ice bound vessels do not obstruct the shipping channel. The Coast Guard's goal is to keep the channels open in the Philadelphia COTP Zone, thus it may be necessary to regulate the passage of vessels, especially those incapable of transiting the area on their own. When ice conditions are severe, convoys are more effective than the "assist as necessary" policy. Convoys should use VHF-FM CH 12 (primary) and VHF-FM CH 06 (secondary). When it becomes necessary to establish convoys in the Philadelphia COTP AOR, the convoys will be formed at the following locations:

EASTBOUND C&D convoys will normally form in the vicinity of SWAN POINT and will depart at 0800 on alternate days depending on the degree of difficulty of passage.

WEST BOUND C&D convoys will normally form in the Delaware River off REEDY POINT. They will start through the C&D Canal at 0800 on alternate days depending on the degree of difficulty of passage.

NORTHBOUND Del. River convoys will form in the vicinity of FORT MIFFLIN at 0800 on alternate days depending on the degree of difficulty of passage.

Marine Safety Broadcasts

Ice Report Broadcasts are numbered sequentially and broadcast daily before the regularly scheduled Safety Broadcasts (0300, 0705, 1130, 1600, and 2030). Ice conditions are reported by geographic area, in terms of: (1) Coverage, (2) Thickness, (3) Description, and (4) Topography.

Descriptive Characteristics:

Coverage:

- Open Water – 10%
- Very Open Pack – 20%
- Open Pack – 40-50%
- Close Pack --60-70%
- Very Close Pack—80-90%
- Consolidated Pack, Compact—100%

Thickness – Reported in inches

Description

- New Ice (slushy)
- Fast Ice (connected to shore)
- Pack Ice (accumulation)

Topography

- Rafting (overriding one another)
- Ridging (multiple rafting)

To Report Ice Conditions

You may report ice conditions 3 ways:

- Via VHF channel 16
- By calling the Command Center at (215) 271-4960
- By sending a fax to (215) 271-4833

Rules of Thumb

The following weather events are general predictors of ice formation in the Delaware River:

- Presence of strong high pressure of arctic origin greater than or equal to a 1020mb high pressure cell centered over the central Ohio/Mississippi Valley,
- A minimum of a 4 degree temperature offset from normal,
- A long trough extending along the eastern sea shore, and/or
- A minimum of 36 hours of sustained below freezing air temperatures.

Related Web Sites

Weather Forecasts

www.weather.gov/er/phi

www.natice.noaa.gov

U. S. Coast Guard

www.uscg.mil

<http://www.uscg.mil/d5/sectdelawarebay/Sector/IceReport/IceReporting.asp>